

## CLAIMS

What is claimed is:

- 1 1. A method of determining a clock frequency for an electronic device installed in a system  
2 with zero or more other electronic devices, comprising:  
3 automatically selecting a clock frequency for the electronic device based at least on  
4 information about the electronic device and the zero or more other electronic devices  
5 installed in the system.
- 1 2. The method of Claim 1, further comprising supplying a clock signal having the  
2 automatically selected clock frequency to the electronic device.
- 1 3. The method of Claim 1, wherein the electronic device is connected to a bus, and further  
2 comprising supplying a clock signal having the automatically selected clock frequency to  
3 the bus.
- 1 4. The method of Claim 1, wherein the information about the electronic device and the zero  
2 or more other electronic devices comprises a number of the other electronic devices  
3 installed in the system.
- 1 5. The method of Claim 1, wherein the automatically selecting a clock frequency is further  
2 based on a thermal budget for the system.
- 1 6. The method of Claim 1, wherein the automatically selecting a clock frequency is further  
2 based on a power consumption budget for the system.
- 1 7. The method of Claim 1, further comprising automatically ascertaining at least some of  
2 the information about the electronic device and the zero or more other electronic devices  
3 installed in the system.

- 1 8. The method of Claim 7, wherein the automatically ascertaining at least some of the  
2 information comprises:  
3 querying at least one of the electronic device and the zero or more other electronic  
4 devices; and  
5 in response to the querying, receiving information from at least one of the electronic  
6 device and the zero or more other electronic devices.
- 1 9. The method of Claim 7, wherein the automatically ascertaining at least some of the  
2 information comprises reading at least a portion of a memory.
- 1 10. The method of Claim 9, wherein the memory comprises a DIP switch.
- 1 11. The method of Claim 1, further comprising ascertaining at least some of the information  
2 about the electronic device and the zero or more other electronic devices installed in the  
3 system through a user interface.
- 1 12. The method of Claim 1, wherein the information about the electronic device and the zero  
2 or more other electronic devices comprises information about an amount of heat at least  
3 one of the electronic device and the zero or more other electronic devices would generate  
4 in relation to a clock frequency at which the corresponding at least one of the electronic  
5 device and the zero or more other electronic devices would operate.
- 1 13. The method of Claim 1, wherein the electronic device is removably installed in an  
2 expansion slot.
- 3 14. The method of Claim 1, wherein at least one of the zero or more other electronic devices  
4 is removably installed in an expansion slot.

- 1 15. An article of manufacture, comprising:  
2 a computer-readable medium storing computer-executable instructions capable of  
3 determining a clock frequency for an electronic device installed in a system with zero  
4 or more other electronic devices, comprising:  
5 automatically selecting a clock frequency for the electronic device based at least  
6 on information about the electronic device and the zero or more other electronic  
7 devices installed in the system.
- 1 16. A frequency manager for determining a clock frequency for an electronic device installed  
2 in a system with zero or more other electronic devices, comprising:  
3 a frequency calculator automatically selecting a clock frequency for the electronic  
4 device based at least on information about the electronic device and the zero or more  
5 other electronic devices installed in the system; and  
6 an interface connected to the frequency calculator and to a clock signal generator, the  
7 interface sending commands to the clock signal generator to generate clock signals at  
8 the clock frequency selected by the frequency calculator.
- 1 17. The frequency manager of Claim 16, wherein the information about the electronic device  
2 and the zero or more other electronic devices comprises a number of the other electronic  
3 devices installed in the system.
- 1 18. The frequency manager of Claim 16, wherein the frequency calculator further bases the  
2 automatically selecting a clock frequency on a thermal budget for the system.
- 1 19. The frequency manager of Claim 16, wherein the frequency calculator further bases the  
2 automatically selecting a clock frequency on a power consumption budget for the system.
- 1 20. The frequency manager of Claim 16, further comprising an information input  
2 automatically ascertaining at least some of the information about the electronic device  
3 and the zero or more other electronic devices installed in the system.

- 1 21. The frequency manager of Claim 20, wherein the information input queries at least one of  
2 the electronic devices to ascertain the at least some of the information about the  
3 electronic device and the zero or more other electronic devices installed in the system.
- 1 22. The frequency manager of Claim 20, further comprising a memory storing at least some  
2 of the information about the electronic device and the zero or more other electronic  
3 devices installed in the system.
- 4 23. The frequency manager of Claim 22, wherein the memory comprises a DIP switch.
- 1 24. The frequency manager of Claim 16, further comprising a user interface, by which the  
2 frequency manager can ascertain at least some of the information about the electronic  
3 device and the zero or more other electronic devices installed in the system.
- 1 25. The frequency manager of Claim 16, wherein the information about the electronic device  
2 and the zero or more other electronic devices comprises information about an amount of  
3 heat at least one of the electronic device and the zero or more other electronic devices  
4 would generate in relation to a clock frequency at which the corresponding at least one of  
5 the electronic device and the zero or more other electronic devices would operate.
- 1 26. The frequency manager of Claim 16, wherein the electronic device is removably installed  
2 in an expansion slot.
- 1 27. The frequency manager of Claim 16, wherein at least one of the zero or more other  
2 electronic devices is removably installed in an expansion slot.
- 1 28. A method of determining a clock frequency for a first and a second electronic device  
2 installed in a system with zero or more other electronic devices, the first electronic device  
3 being connected to a first bus and the second electronic device being connected to a  
4 second bus, comprising:  
5 automatically selecting a clock frequency for both the first and second electronic  
6 devices based at least on information about the first and second electronic devices and  
7 the zero or more other electronic devices installed in the system.

- 8 29. The method of Claim 28, further comprising supplying clock signals having the  
9 automatically selected clock frequency to the first and second electronic devices,  
10 respectively.
- 1 30. The method of Claim 28, further comprising supplying a clock signals having the  
2 automatically selected clock frequency to the first and second buses, respectively.
- 1 31. The method of Claim 28, wherein the information about the first and second electronic  
2 devices and the zero or more other electronic devices comprises a number of the other  
3 electronic devices installed in the system.
- 1 32. The method of Claim 28, wherein the automatically selecting a clock frequency is further  
2 based on a thermal budget for the system.
- 1 33. The method of Claim 28, wherein the automatically selecting a clock frequency is further  
2 based on a power consumption budget for the system.
- 1 34. The method of Claim 28, further comprising automatically ascertaining at least some of  
2 the information about the first and second electronic devices and the zero or more other  
3 electronic devices installed in the system.
- 1 35. The method of Claim 34, wherein the automatically ascertaining at least some of the  
2 information comprises:  
3 querying at least one of the first and second electronic devices; and  
4 in response to the querying, receiving information from at least one of the first and  
5 second electronic devices.
- 1 36. The method of Claim 34, wherein the automatically ascertaining at least some of the  
2 information comprises reading at least a portion of a memory.
- 1 37. The method of Claim 36, wherein the memory comprises a DIP switch.
- 1 38. The method of Claim 28, further comprising ascertaining at least some of the information  
2 about the first and second electronic devices through a user interface.

- 1 39. The method of Claim 28, wherein the information about the first and second electronic  
2 devices and the zero or more other electronic devices comprises information about an  
3 amount of heat at least one of the first and second electronic devices and the zero or more  
4 other electronic devices would generate in relation to a clock frequency at which the  
5 corresponding at least one of the first and second electronic devices and the zero or more  
6 other electronic devices would operate.
- 1 40. The method of Claim 28, wherein at least one of the first and second electronic devices is  
2 removably installed in an expansion slot.
- 3 41. The method of Claim 28, wherein at least one of the zero or more other electronic devices  
4 is removably installed in an expansion slot.
- 1 42. An article of manufacture, comprising:  
2 a computer-readable medium storing computer-executable instructions capable of  
3 determining a clock frequency for a first and a second electronic device installed in a  
4 system with zero or more other electronic devices, the first electronic device being  
5 connected to a first bus and the second electronic device being connected to a second  
6 bus, comprising:  
7 automatically selecting a clock frequency for both the first and second electronic  
8 devices based at least on information about the first and second electronic devices  
9 and the zero or more other electronic devices installed in the system.
- 1 43. A frequency manager for determining a clock frequency for a first and a second  
2 electronic device installed in a system with zero or more other electronic devices, the first  
3 electronic device being connected to a first bus and the second electronic device being  
4 connected to a second bus, comprising:  
5 a frequency calculator automatically selecting a clock frequency for both the first and  
6 second electronic devices based at least on information about the first and second  
7 electronic devices and the zero or more other electronic devices installed in the  
8 system; and

9           an interface connected to the frequency calculator and to a first clock signal generator  
10           and a second clock signal generator, the interface sending commands to the first and  
11           second clock signal generators to generate clock signals at the clock frequency  
12           selected by the frequency calculator.

1    44.    The frequency manager of Claim 43, wherein the information about the first and second  
2           electronic devices and the zero or more other electronic devices comprises a number of  
3           the other electronic devices installed in the system.

1    45.    The frequency manager of Claim 43, wherein the frequency calculator further bases the  
2           automatically selecting a clock frequency on a thermal budget for the system.

1    46.    The frequency manager of Claim 43, wherein the frequency calculator further bases the  
2           automatically selecting a clock frequency on a power consumption budget for the system

1    47.    The frequency manager of Claim 43, further comprising an information input  
2           automatically ascertaining at least some of the information about the first and second  
3           electronic devices and the zero or more other electronic devices installed in the system.

1    48.    The frequency manager of Claim 47, wherein the information input queries at least one of  
2           the first and second electronic devices to ascertain the at least some of the information  
3           about the first and second electronic devices and the zero or more other electronic devices  
4           installed in the system.

1    49.    The frequency manager of Claim 47, further comprising a memory storing at least some  
2           of the information about the first and second electronic devices and the zero or more  
3           other electronic devices installed in the system.

4    50.    The frequency manager of Claim 49, wherein the memory comprises a DIP switch.

1    51.    The frequency manager of Claim 43, further comprising a user interface, by which the  
2           frequency manager can ascertain at least some of the information about the first and  
3           second electronic devices and the zero or more other electronic devices installed in the  
4           system.

1 52. The frequency manager of Claim 43, wherein the information about the first and second  
2 electronic devices and the zero or more other electronic devices comprises information  
3 about an amount of heat at least one of the first and second electronic devices and the  
4 zero or more other electronic devices would generate in relation to a clock frequency at  
5 which the corresponding at least one of the first and second electronic devices and the  
6 zero or more other electronic devices would operate.

1 53. The frequency manager of Claim 43, wherein at least one of the first and second  
2 electronic devices is removably installed in an expansion slot.

1 54. The frequency manager of Claim 43, wherein at least one of the zero or more other  
2 electronic devices is removably installed in an expansion slot.